

WHAT IS CLAIMED IS:

1 1. A method comprising the steps of:
 2 identifying an operating characteristic based on a number of commands queued in an
 3 instruction buffer; and
 4 adjusting a system characteristic based on the operating characteristic, wherein a power
 5 consumption is modified based on the system characteristic.

1 2. The method as in Claim 1, wherein the steps are performed through set of discrete components.

1 3. The method as in Claim 1, wherein the commands queued in the command buffer, of the number
 2 of commands, include instructions to be processed by a processor associated with the system.

1 4. The method as in Claim 1, wherein the instructions include display instructions.

1 5. The method as in Claim 1, wherein the operating characteristic includes a number of pending
 2 operations.

1 6. The method as in Claim 1, wherein the operating characteristic includes fill rate associated with
 2 the instruction buffer.

1 7. The method as in Claim 1, wherein the operating characteristic includes a type of instructions in
 2 the instruction buffer.

1 8. The method as in Claim 1, wherein the step of adjusting the system characteristic includes
 2 altering the number of bits used to represent multimedia data.

- 1 9. The method as in Claim 8, wherein the multimedia data includes video data.
- 1 10. The method as in Claim 8, wherein the multimedia data includes audio data.
- 1 11. The method as in Claim 1, wherein the step of adjusting the system characteristic includes
2 reducing clock speed used to process commands.
- 1 12. The method as in Claim 11, wherein a nominal power provided to the system is altered to match
2 an amount of power needed for the speed used.
- 1 13. The method as in Claim 11, wherein a number of bits used to represent multimedia data is
2 reduced.
- 1 14. The method as in Claim 13, wherein the multimedia data includes video data.
- 1 15. The method as in Claim 13, wherein the multimedia data includes audio data.
- 1 16. The method as in Claim 1, wherein the step of adjusting the system characteristic includes
2 altering a nominal power provided to the system.
- 1 17. The method as in Claim 16, wherein a clock speed changed to match a change in the nominal
2 power.
- 1 18. The method as in Claim 16, wherein a number of bits used to represent multimedia data is
2 changed to match a change in the nominal power.

- 1 19. The method as in Claim 18, wherein the multimedia data includes video data.
- 1 20. The method as in Claim 18, wherein the multimedia data includes audio data.
- 1 21. The method as in Claim 1, wherein the operating characteristic is based on buffer fullness.
- 1 22. The method as in Claim 21, wherein the step of adjusting the system characteristic includes
2 reducing a clock speed when the buffer fullness is less than a predetermined buffer fullness.
- 1 23. The method as in Claim 21, wherein the step of adjusting the system characteristic includes
2 reducing a maximum power provided to the system when the buffer fullness is less than a
3 predetermined buffer fullness.
- 1 24. The method as in Claim 21, wherein the step of adjusting the system characteristic includes
2 reducing a number of bits to represent multimedia data when the buffer fullness is less than a
3 predetermined buffer fullness.
- 1 25. The method as in Claim 21, wherein the step of adjusting the system characteristic includes
2 increasing a clock speed when the buffer fullness is greater than a predetermined buffer
3 fullness.
- 1 26. The method as in Claim 21, wherein the step of adjusting the system characteristic includes
2 increasing a maximum power provided to the system when the buffer fullness is greater than
3 a predetermined buffer fullness.

- 1 27. The method as in Claim 21, wherein the step of adjusting the system characteristic includes
2 increasing a number of bits to represent multimedia data when the buffer fullness is greater
3 than a predetermined buffer fullness.

- 1 28. A system comprising:
2 an instruction buffer to store pending instructions;
3 an buffer monitor to:
4 track a buffer statistic;
5 provide a buffer status of said buffer statistic to a power threshold;
6 a power module to initiate a power conservation feature based on said buffer status.
- 1 29. The system as in Claim 28, further including a threshold register to store a statistic threshold.
- 1 30. The system as in Claim 29, wherein said buffer status includes a comparison between said
2 buffer statistic and said statistic threshold.
- 1 31. The system as in Claim 28, wherein said pending instructions include multimedia instructions.
- 1 32. The system as in Claim 31, wherein said multimedia instructions include display instructions.
- 1 33. The system as in Claim 31, wherein the multimedia instructions include audio processing
2 instructions.
- 1 34. The system as in Claim 28, wherein said buffer statistic includes a fullness of said instruction
2 buffer.
- 1 35. The system as in Claim 28, wherein said buffer statistic includes a number of pending
2 instructions in said instruction buffer.

1 36. The system as in Claim 28, wherein said buffer statistic includes a rate of change in a number of
2 pending instructions in said instruction buffer.

1 37. The system as in Claim 28, wherein said buffer statistic includes types of instructions in said
2 instruction buffer.

1 38. A computer readable medium tangibly embodying a program of instructions to manipulate a
2 data processor to:
3 identify an operating characteristic based on a number of instructions queued in an
4 instruction buffer; and
5 adjust a system characteristic based on the operating characteristic, wherein a power
6 consumption is modified based on the system characteristic.

1 39. The computer readable medium as in Claim 38, wherein the operating characteristic includes a
2 rate of change in the number of instructions queued in the instruction buffer.

1 40. The computer readable medium as in Claim 38, wherein the operating characteristic includes a
2 type of instructions of the instructions queued in the instruction buffer.

1 41. The computer readable medium as in Claim 38, wherein the system characteristic includes a
2 number of bits used to represent multimedia data.

1 42. The computer readable medium as in Claim 41, wherein the system characteristic includes a
2 clock speed used to process the instructions.

1 43. The computer readable medium as in Claim 38, wherein the system characteristic includes a
2 supported power.